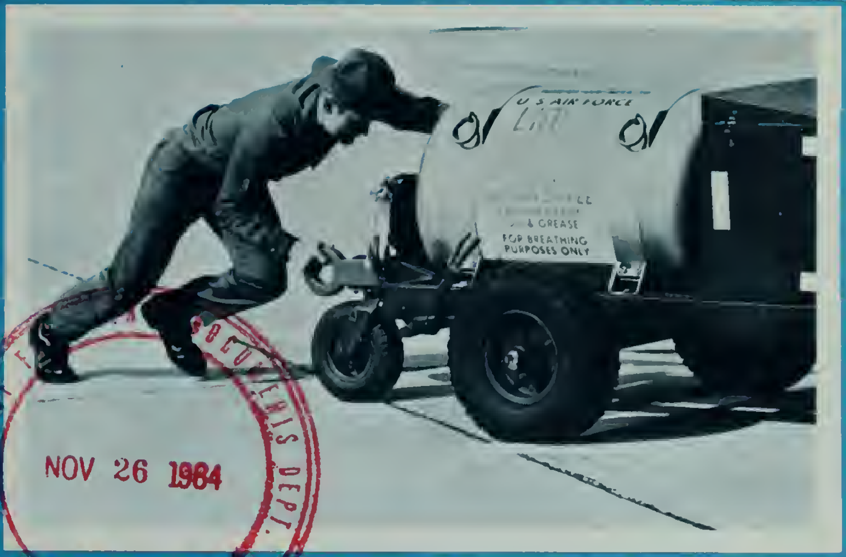
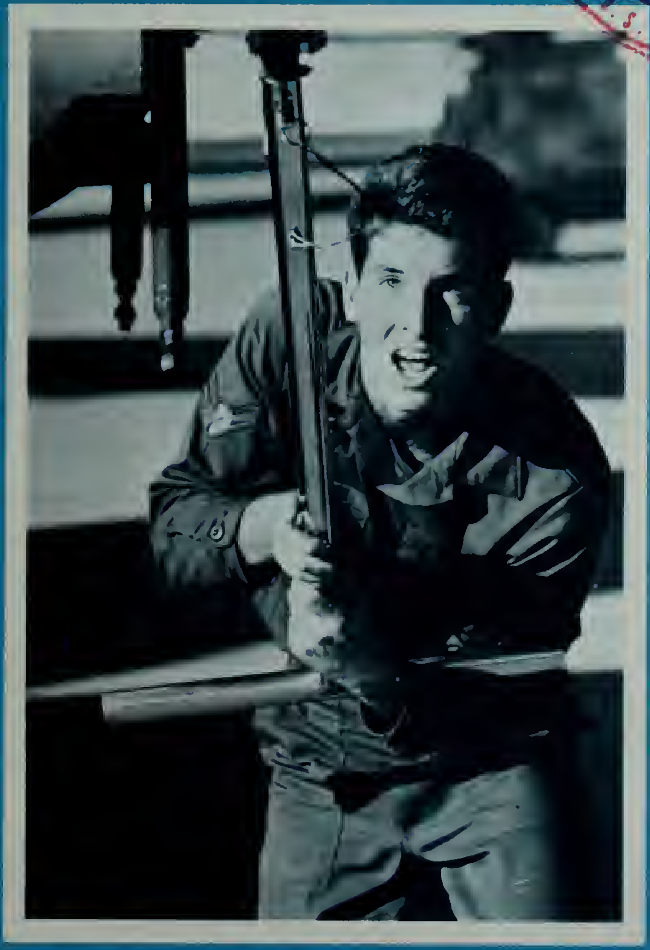
D 301.81: 34/11

Combat Crew

Strategic Air Command



AIR UNIV. DOCUMENTS DEPT.
NOV 26 1984
U.S. DEPOSITORY



1984 SAC LOADING COMPETITION

PAGE 4

NOVEMBER 1984
★ ★ ★ ★

Combat Crew

GEN BENNIE L. DAVIS
COMMANDER IN CHIEF, SAC

BRIG GEN GEORGE LEE BUTLER
INSPECTOR GENERAL

COL CHARLES J. WINGERT
DIRECTOR OF SAFETY

STAFF

EDITOR
MAJ BOB NEIDRICK

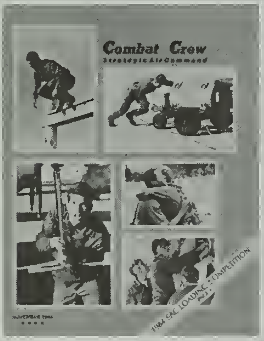
ASSOCIATE EDITOR
KEN MAASSEN

ART EDITOR
W.A. KIRKPATRICK

EDITORIAL ASSISTANT
M. J. ABBOUD

IN THIS ISSUE

SAC Loading Competition 4
A/C OPS in North Atlantic Region 9
CFIC 14
Don't Get Frost-Bitten.. 16
New Jersey Air National Guard............................ 18
Double Standards... 20
Cutting Edge 21



ON OUR COVER

Combat Crew salutes the hard working people who participated in the 1984 SAC Combat Weapons Loading Competition.

SACRP 127-1 VOL. XXXIV NO. 11 NOVEMBER 1984

COMBAT CREW is an internal publication of the Strategic Air Command with the primary purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all mishaps printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with mishap stories are fictitious. Written permission must be obtained from Headquarters, Strategic Air Command, before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF. Distribution FX, controlled by IGFC SAC units submit distribution requests through local PDO. Reader to copy ratio 10:1. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Contributions are encouraged as well as comments and criticism. Direct correspondence with the Editor is authorized. Address correspondence to Editor, Combat Crew, HQ SAC/IGFE Offutt AFB, NE 68113, AV 271-2620.

Personal Discipline . . .

The Difference Between Success and Failure

Editor's note: *"Personal Discipline . . . the Difference Between Success and Failure" was originally published in the May '77 issue of Combat Crew. It contains several thought-provoking ideas that young crewmembers can benefit from and we "old heads" need to hear again.*

The abstract words *success* and *failure* conjure up as many different images as there are people with an understanding of the terms. One views the successful individual with pride, awe and often envy, while life's failures receive our scorn, our pity, or worse. What is the ingredient, that personality trait, that makes one man a success and his brother a failure?

Several years ago I came across a few lines which I think strike at the heart of the matter. Though I don't recall the author's name, his message has stayed with me.

> *"Nothing in the world can take the place of persistence. Talent will not! Nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education alone will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent."*

Inspiring words, but I submit that persistence and determination rest upon a more basic keystone — personal discipline. Without first achieving personal discipline, or, if you prefer, self-discipline, the odds of being successful in any field of human endeavor quickly become astronomical. Without personal discipline to drive their talents, the masterpieces of Rembrandt, Beethoven and Michelangelo would never have been created and the spirit of man would be the poorer. Without personal discipline to enhance the genius of Pasteur, Jenner and Fleming, the body of man would possibly have been denied treatment for rabies and smallpox and the healing powers of penicillin. Edison said that genius was 2 percent inspiration and 98 percent perspiration. The perspiration of Edison — discipline if you will — produced theretofore undreamed of improvements in the way we work and play.

A dream of a better world, supported by conviction and steeled with personal discipline helped Clara Barton to create the American Red Cross and Dr. Martin Luther King to lead the greatest nonviolent crusade in modern times to improve relations between the races.

Without George Washington our nation possibly would not have been founded and had it not been for Abraham Lincoln, it may not have survived. Without self-discipline they could not have achieved what they did. How different our lives and country would be had these two towering titans been lesser men!

Positive achievement in every field of human endeavor is possible only when supported by massive doses of personal discipline. The great artist, soldier, statesman, athlete and scholar, and yes, mother and father, all possess this ennobling trait.

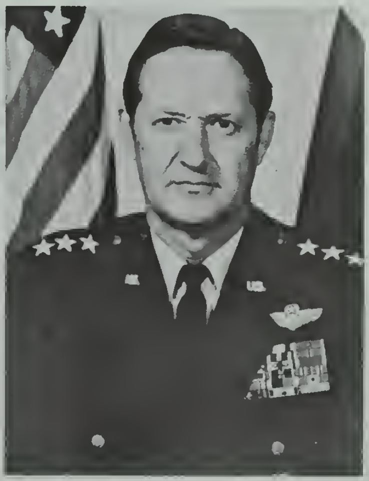
How does one acquire the ingredient that I am touting so highly? Are we born with it? Can it be gained in a single bound? Or, is it achieved in a slow, possibly grueling, step-by-step process? An unfortunate few never find it and they are relegated to obscurity and failure. Others gain it to varying degrees and to that same degree find their rung on the ladder of success.

Although no two people gain the ability to discipline themselves in the same manner and what works in one instance may not work in another, the broad outlines for such a training program are abundantly evident. The process must start at birth. It inculcates the principles of love, respect, caring and careful guidance provided in an atmosphere of "setting the example" by parents, teachers, clergy and others in a position to affect the development of the child. As one matures, the evolution of personal discipline is enhanced or impaired by one's choice of associates and environment.

While every field and every individual can reap untold profit through the merits of personal discipline, nowhere is it more necessary, more vital, than in the military calling. Personal discipline is the cornerstone of group discipline. Unless one can discipline oneself one cannot successfully perform as a member of a society where discipline is all important. The disciplined individual, squad, flight, etc. is the hallmark of the successful military unit. Time and time again history tells of the victories, often in the face of seemingly overwhelming odds, won by disciplined troops and equally can relate the sorry tale of routs and defeats suffered by undisciplined armies led by undisciplined officers.

Washington, Jackson, Sherman, Pershing, all disciplined men at arms, stir our imaginations and join their latter-day brothers. Mitchell, Spaatz, Arnold, Doolittle and LeMay in showing us, by their example, what is required of each individual in military uniform today. They charge all of us to excell through persistence, determination and personal discipline to enhance the worth of our Air Force and in turn add to the strength and security of our nation.★★★

Lieutenant General Bryan M. Shotts
USAF (Ret)



BLACK HILLS BANDITS WIN

28th BMW Takes the Barrentine

Maj Bob Neidrick
Editor

The Black Hills Bandits from Ellsworth were amiable hosts until it came to the awards presentation at the 1984 SAC Combat weapons Loading Competition. While visiting competitors may have taken home Black Hills gold, silver, in the form of the coveted Barrentine Trophy, remained with the hosts from Ellsworth.

The Bandits led the competition almost from the opening gun and finished with 2,874 of a possible 3000 points. Second place went to the 509 BMW from Pease which chalked up 2852 points. Last year's winner, the 416 BMW from Griffiss, finished third with 2835 points. Only seven-tenths of one percent separated the winner and runner-up.

The Barrentine Trophy is presented to the best wing competition team in SAC. The trophy, first awarded in 1976 was donated by the Boeing Company and memorializes the late CMSgt Wilbur R. Barrentine who is remembered by his supervisors and fellow workers as a people oriented manager. Chief Barrentine was associated with Strategic Air Command munitions loading from the mid fifties until his death in September 1970, while serving on active duty.

Maj Gen Monroe W. Hatch, then the SAC Chief of Staff, addressed the competitors during the opening ceremony on 5 September. Gen Hatch drew an analogy of the SAC combat loading competition to the recently completed Olympics. "You were selected much like those who participated in the summer Olympics by demonstrating what distinguished you from your contemporaries," he said. "You represent an extraordinary category of airman." That comparison to the

Olympics carried throughout the following week of competition, each team determined to demonstrate that they were "best of the best" and through the spirit evident at the competition banquet on 12 September as competitors chanted the now familiar "USA, USA."

Each of the 17 participating wings was represented by a competition team composed of a four or five person munitions load crew, an aircraft crew chief and a six person security police element. Competition began at 0700 on Thursday, 6 September, and lasted until the final security police element completed the demanding confidence course on Tuesday, 11 September.

Munitions teams were evaluated on the conditions of their equipment, two munitions loads and a written test. The maximum possible score for each load team was 1,250 points. The 93 BMW from Castle was the top load team garnering 1,223 points. Only two points behind was the 410 BMW from K. I. Sawyer.

Each aircraft crew chief performed an aircraft preload and postload exercise and also took a written exam for a possible 250 points. The home town favorite, SSgt Troy E. Holbrook of Ellsworth was the winner with 223 points. He finished two points ahead of the crew chiefs from Andersen and Loring, SSgt Jeffrey E. Aamot and SrA Richard Moreau, respectively.

Top security police honors again went to the home team. The 44 SPS of Ellsworth amassed 1467 of a possible 1500 points to win. The SP's competition consisted of a practical exercise, confidence course, tactical wapons firing and a written test. The Ellsworth cops also achieved the best scores for SP testing and confidence course. The best SP supervisor was TSgt John W. Bibbs, 416 SPS, Griffiss.

Three new events were featured in this year's competition. For the first time, load crews loaded an air launched cruise missile pylon, loaded a B-83 gravity bomb on an FB-111 and security police participated in a tactical weapons firing course.

The four units loading the ALCM were Griffiss, Wurtsmith, Grand Forks and Fairchild. Concerning the ALCM load, MSgt Jerel Sateren, a munitions evaluator for the competition said, "This is a relatively new weapon system. By incorporating it in the competition, it allows for crossfeeding of problem areas that surfaced during the summer practice months. The loads show our ability to quickly and reliably load a weapon system and set a command standard. Setting that standard with the best ALCM load was the 416 BMW from Griffiss.

Security police competitors were ambushed and fired upon by snipers while they ran a 1200 meter course over extremely rugged terrain. The aggressors fired beams of light from laser equipped M-16 rifles and M-60 machine guns. The Multiple Integrated Laser Engagement System (MILES) was not new to the competition, but the use of a live tactical environment complete with snipers and ambush teams was new. SMSgt Tom Gorman, Security Police project officer for the competition, said: "This gives us a chance to evaluate their reactions to a real situation rather than an artificial target." Many teams went through the course hitting all the targets without losing any team members. Sgt Gorman pointed out: "The tough part of the course was the last 300 to 400 meters. That part of the course was particularly grueling because of simulated artillery shell bursts and snipers ambushing the competitors." The best weapons firing honors went to the 320 SPS from Mather, which lost only one point out of a possible perfect score of 300.

On Tuesday, 11 September at 2100 hours, all the competitors and guests congregated around the score board at competition headquarters. Tension grew as Col Francis L. Eubank, Jr., SAC Director of Munitions and competition

Gen Davis presents the Barrentine Trophy to Col Steve Nielson, commander 28 BMW.

Strategic Air Command

Combat
Weapons
Loading
Competition

Lt Gen Peek presents FB-111 Trophy to Sgt Dallas N. Stevens, Pease.

Lt Gen Light presents plaque to SSgt Edith Wolf 93 BMW.

Col Robert A. Swing presents trophy to A1C Maurice P. Doe of Plattsburgh.

The 410 BMW wins the Spirit Bell.

The winning team from Ellsworth.

THE WINNERS

Barrentine Trophy Ellsworth	28 BMW
Best Munitions Load Crew Castle	93 BMW
Best Security Police Unit Ellsworth	44 SPS
Best Bomber Crew Chief Ellsworth	28 BMW
Best Combined Load Crew K I Sawyer	410 BMW
Best B-52 Load Mather	320 BMW
Best FB-111 Load Pease	509 BMW
Best SRAM Load K I Sawyer	410 BMW
Best ALCM Load Griffiss	416 BMW
Best MMS Testing Mather	320 BMW
Best Crew Chief Preload Exercise Pease	509 BMW
Best Crew Chief Postload Exercise Griffiss	416 BMW
Best Crew Chief Testing Andersen	43 SW
Best SP Practical Exercise Plattsburgh	380 BMW
Best SP Testing Ellsworth	44 SPS
Best SP Tactical Weapons Firing Mather	320 BMW
Best SP Confidence Course Performance Ellsworth	44 SPS
Best SP Supervisor Griffiss	416 BMW
Spirit Bell Award K I Sawyer	410 BMW

Chief MSgt of the Air Force Parish addresses the competitors at the competition banquet.

A couple of team mascots.

commander announced category winners as evaluators from Maintenance Standardization and Evaluation Team (MSET) posted the scores. Finally, the waiting was over, the Black Hills Bandits had won the Barrentine.

The final event of the 1984 SAC Combat Weapons Loading Competition was a competition banquet held on Wednesday, 12 September. The featured speaker was CMSgt Sam Parish, Chief Master Sergeant of the Air

Cont'd on page 26

AIRCRAFT OPERATIONS IN THE NORTH ATLANTIC REGION

Capt Rick Spott
32 AREFS, Barksdale AFB

Editor's note: Recently, several SAC pilots have become involved in embarrassing incident investigations involving alleged flying violations while crossing the North Atlantic. A careful perusal of this article could preclude future embarrassment.

On 1 Oct, 83, the USAF Aeronautical Stations System changed its name to the USAF Global Command and Control System (GCCS), and simultaneously dropped its responsibilities as primary position reporting agency for USAF crews. As aircrews, we will now talk directly to the civil Air Traffic Control agencies during overwater flights outside the UHF/VHF range. Suppose you have a fighter drag to the U. K. coming up, or maybe a Busy Brewer deployment. How should you communicate? What are the new procedures? The following is provided as general guidance for crews who may be unfamiliar with operations in the North Atlantic Track (NAT) system. The complete details of the North Atlantic Oceanic Region are contained in FLIP AP/2, Chapter 5. Tie-in route descriptions and the North American Route System (NARs) procedures are published in FLIP AP/2 and the Canadian Flight Supplement. You should be thoroughly familiar with these documents prior to flying in the NATs.

Minimum Navigation Performance Specifications (MNPS) Airspace: The concept of MNPS has been adopted on a worldwide basis by the ICAO. All of the NAT region is controlled airspace in which Instrument Flight Rules apply at all times. For the North Atlantic Region, compliance with MNPS is required by all aircraft operating within the following airspace boundaries:

- Between FL 275 and FL 400;
- Between latitudes 27°N and 90°N;
- The eastern boundaries of Santa Maria, Shanwick and Reykjavik Oceanic Control Areas (CTA).
- The western boundaries of Reykjavik, Gander and New York Oceanics CTAs, excluding the area west of 60°W and south of 38°20'N. Note: Military aircraft operating on approved ALTRVs are exempt from meeting the MNPS criteria.

Aircraft Equipment: While the concept of MNPS emphasizes performance rather than specific equipment, the following equipment is considered the minimum necessary to comply with the MNPS: a) Omega with Doppler; or b) Dual Inertial Navigation Systems (INS); or

c) Single INS (including palletized) when the crew includes a qualified navigator.

Construction of the Organized Track System (OTS): A system of organized tracks across the North Atlantic is constructed every 12 hours. After construction of the basic minimum time track, the OTS is constructed by the appropriate Oceanic Area Control Center (OACC). The agreed organized track system is then promulgated as the Nat Track Message. This message gives full details of the coordinates of organized tracks as well as the flight levels that are expected to be in use on each track. In most cases there are also details of domestic entry and exit routings associated with each track. During the daytime period the most northerly track at its origin is designated Track "A" (Alpha) and the next most northerly "B" (Bravo) etc, while in the night time system the most southerly at point of origin is designated Track "Z" (Zulu) and the next most southerly "Y" (Yankee) etc. The period of validity is stated in the message, usually 1130Z to 1900 Z at 30° West for the daytime (westbound) OTS and 0100Z to 0800Z at 30° West for the night time (eastbound) system. (This structure is in use on a trial basis only and is not published in Flip.) Oceanic airspace outside the published OTS is available for use by random operators. The fact that a specific flight level is not mentioned in the NAT message does not necessarily mean that it cannot be made available if requested.

OTS Changeover Periods: In order to permit an orderly changeover between successive organized track systems the following guidelines apply: Flights which plan to enter the oceanic system during transition periods (normally 1900Z-0100Z and 0800Z-1130Z) should be planned as random flights or use the coordinates of a track in the system which is about to come into effect. The following restrictions apply: a) If crossing 30W within one hour of the incoming NATs (0000-0100Z and 130-1130Z) and opposing the direction of the incoming NATs, you must conform to the incoming route and altitudes. b) If crossing 30W within two hours, but not later than one hour of the incoming NATs (2301 - 0000Z and 0931 - 1030Z) and opposing the direction of the incoming NATs, you must conform to the incoming NAT route and fly hemispheric altitudes after crossing 30W. On many occasions tracks on two successive systems may appear to have the same coordinates, but special care should be taken to ensure that this is really the case for the whole track.

Flight Plans: Special rules (see FLIP AP/2, section A, "Flight Planning") apply for flights operating north of 70° north, but south of that latitude all generally eastbound and westbound traffic should normally flight plan so that specified 10 degrees of longitude are crossed at whole degrees of latitude. If (and only if) the flight is planned to operate along the whole length of one of the organized tracks, the intended track should be defined in item 15 of the flight plan using the abbreviation "NAT" followed by the code letter assigned to the track. Only the ETA over the commencement point of the oceanic track should be specified in item 13. For flights wishing to join or leave an organized track at some intermediate point, full track details should be specified in the flight plan. The trackletter should not be used to abbreviate any portion of the route in these circumstances. For flights conducted wholly or partly outside the OTS, estimated times for significant points along the route of flight should be specified in item 18.

For all flights intending to operate within the MNPS airspace for any portion of their flight, the letters "SX" should be inserted in item 10 of the flight plan indicating that the flight is certified as being in compliance with the MNPS.

Clearances: An Oceanic Clearance must be received before entering an Oceanic Flight Information Region (FIR). The clearance you received prior to takeoff ("cleared as filed to destination . . .") is not an Oceanic Clearance. Copies of the current NAT message must be readily available when requesting clearance since you may not get the track you filed for.

Methods of Obtaining Oceanic Clearance: Use of VHF clearance delivery (found in the Canadian and European IFR supplements).

Use of HF to the OAC.

Relay through domestic ATC.

Requesting a Clearance: State your call sign and request clearance to include desired track and Mach number. Your abbreviated clearance will include:

- Cleared track (by code letter).
- Cleared flight level.
- Cleared Mach number.
- If the aircraft is designated to report meteorological information in flight, the phrase "Send Met Reports."

On receipt of the abbreviated clearance the aircrew will read back all coordinates and full details of the track in addition to the other contents of the clearance.

Example: Let's say your copy of the NAT message looks like this:

- BEN 59/10 62/20 64/30 64/40 63/50 61/60 YVP EAST LVLS NIL WEST LVLS 310 330 350
- LND 50/08 47/20 46/30 45/40 45/50 BANCS EAST LVLS NIL WEST LVLS 310 330 350 370
- DIN 49/08 46/20 45/30 43/40 42/50 42/60 POGGO EST LVLS NIL WEST LVLS 310 350 370

You filed for NAT "C" flight level 370, Mach .82. You request your clearance and receive the following from ATC: "ATC clears Casey 10 NAT Bravo, flight level 350, Mach decimal 82, go ahead." You would answer "Roger, ATC clears Casey 10 Nat Bravo, Lands End, 50 north, 08 west; 47 north, 20 west; 46 north, 30 west; 45 north, 40 west, 45 north, 50 west; BANCS, flight level 350, Mach decimal 82." It's that simple.

Transponder Operation: Prior to reaching a point 30 minutes from a control area boundary, unless otherwise directed by ATC, squawk Mode 3/A code 2000 when eastbound and 3000 when westbound.

HF Communications: Most NAT air/ground communications are conducted on HF frequencies by upper side band. Unlike domestic ATC, we communicate with the OACs via HF radio stations manned by communicators (people who listen to HF for a living) who have no executive ATC authority. You cannot expect an immediate response from them on requests.

HF Communications Failure: In the event you lose your HF radios while enroute after coast-out, you should make every effort to relay your position reports through other aircraft. Establish initial contact on any of the following frequencies:

- 243.0, guard
- 311.0, SAC common
- 349.4, MAC common
- 121.5, guard
- 123.45, commercial common

Once you have contact, relay your position report on another frequency. In all cases of comm failure you should fly your cleared route, not the one you filed for.

Navigation System Failures: Prior to entering the MNPS airspace, the aircraft's navigation system must be operational. If not, consider the following alternatives:

- Proceed along one of the northern routes published in FLIP Chapter 5, paragraph 2f. (Do you have a copy available?)
- Ask the controlling agency for permission to operate in the MNPS airspace with less than the required navigation systems. This may be approved during non peak hours. (Do you have confidence in your remaining navigation systems?)
- Obtain a new clearance above or below the MNPS airspace.
- Abort the mission and return to a repair base.

If the required systems fail after entering the MNPS airspace, you must decide whether to continue or return. In any case, tell the controlling agency that you do not have the necessary systems and you expect to maintain centerline within XX miles. They will then ask if you are still MNPS capable. If you are not, they may ask you to descend below the MNPS altitude structure. If for fuel or for other considerations you cannot descend, you may have to declare an emergency to get required handling. However, just because you have declared "Minimum Nav Aids" does not mean you do not have to attempt to maintain course centerline. You may still receive a Navigation Fault Report (30 miles off course). If you deviate 25 miles or more from the cleared track you must submit an OPREP 3 (as defined by JCS Pub 6 and SACR 55-3) whether or not a violation was reported by the controlling agency.

Departure Reports: Departure reports are no longer required by ATC, however, depending on your mission, you may be required to maintain a listening watch on a GCCS frequency. Check with the mission controlling authority for guidance. If you have only one HF radio, your decision is easy: leave the HF tuned to your assigned ATC frequency just as you would with only one UHF or VHF radio. If a command/control agency needs to contact you, they should relay through the civilian OACC a message for you to "contact company." "Company" means the appropriate USAF GCCS station. See the Flight Information Handbook, Section B, for details on the GCCS.

Position Reporting Procedures: Unless otherwise required by ATC, position reports from flights not defined by designated reporting points should be made at the significant points listed in the flight plan. Generally speaking, these reports should be made at each 10° of longitude if your groundspeed is such that 10° will be traversed within approximately one hour (Flip uses one hour and 20 minutes as a guide). If slower than that, report every 5°. Reports of/at ADIZ penetration points and FIRs are not normally required. You should report your position at the time you cross the point or as soon thereafter as possible. The prefix "Position" should be used when passing position reports either on the initial call or prior to the text of the message.

Content of Position Report Message and Sequence:

- "Position"
- Flight identification
- Present position (reporting point)
- Time over present position (hours and minutes)
- Present flight level
- Next reporting point and ETA (hours and minutes)
- Name only or coordinates only of next succeeding reporting point.
- Any further information (Met reports, company message, altitude request)

If the ETE for the next position is found to be in error by three minutes or more, a revised estimate should be transmitted to ATC as soon as possible.

If your next position is a boundary line between two agencies (i.e., 30° West), you should address your position report to both agencies (e.g.,"Shanwick copy Gander"). A complete example follows:

"Shanwick, Casey 10 position."

"Casey 10, Shanwick, go ahead."

"Shanwick, copy Gander, Casey 10, 47 North 20 West, 1020, flight level 350, estimate 46 North 30 West at 1105, 45 North 40 West next."

They will read back your position report to you and you're done until the next report.

Well, there you have the basics to operating in the NATs. This guide is in no way complete, so a little time studying the various Flip documents would be beneficial. The frequencies are usually congested, so it is important to know how and what to communicate. Operating in the NATs depends on absolute professionalism from every aviator, both civil and military. Remember, the entire aviation world is listening. Knowledge of how the system operates will help us perform our mission in the safest, most expeditious and professional manner possible.

Have a good trip.

References for this article were obtained from the following sources: North Atlantic MNPS Airspace Operations Manual, 3d Edition; North Atlantic Organized Tracks, 436 MAW/DOV, Dover AFB; Gander Center; Flight Information Publications; HQ MAC Stan/Eval, Scott AFB; Instrument Flight Center, Randolph AFB; Defense Mapping Agency.

WHO IS HEADDANCER?

Capt Guy J. Wills
8 TDC (TAC), Tinker AFB

Those of you who fly fighter deployments across the ponds usually pass the air refueling offload reports to **Headdancer.** Well, who is **Headdancer** anyway?

The official definition states that Headdancer will provide the commander of the Tactical Air Command with an airborne communications capability for exercising command and control of TAC/USAFRED/AFLANT forces during deployment/employment/redeployment operations. **Headdancer** provides on scene airborne command and control for tactical air coordination and employment direction of forces while also serving as an extension of or alternate for the fixed TAC headquarters command post.

Headdancer is the aircraft movement control team (deployment battlestaff) who fly in a TAC EC-135. The team consists of a mission director (the boss), tactical air monitor (the fighter expert), operations controller (HQ TAC representative), weather officer, and cell monitors (they receive the offload reports). The front end are flight crews from the 8th Tactical Deployment Control Squadron at Tinker AFB. The front end uses the AFKAI call sign and the battlestaff answers to the call sign **Headdancer.**

The positioning of the aircraft Tactical Deployment Control Aircraft (TDCA) is always a prime concern. Reading the ALTRAV/FRAG, you will always see that the TDCA **Headdancer** reserves the top 500 ft of the block. The positioning of the aircraft is such that radio contact can be maintained among the cells. This position may vary depending on the number of cells or if an orbit is required. However, five miles in trail of a cell normally provides the best coverage and least potential conflict. Usually this position is between cell 1 and cell 2. Everyone can picture why the top of the block is reserved for **Headdancer.** Many times the fighters will try to talk the cell lead into climbing to the top of the block for better fuel conservation. Just remember **Headdancer** is probably there.

Another potential problem occurs when the tankers return to base. Several times we have seen a tanker turn right or left, departing the flow and climb to the top of the block or out of the ALTRAV. Anyone in the cell can be displaced right or left of course. Therefore, check to see where **Headdancer** is! Coordinate your climb and departure. The best way is to turn right or left, maintain altitude and fly north or south a degree of latitude before climbing. There are many ways to depart the flow, but the key is COORDINATION.

Another potential problem can be the mid ocean rendezvous. Remember **Headdancer** is between the cells of fighters at the top of the block. Descending through the block to the correct altitude enroute to a mid ocean rendezvous is not always the best idea. Prior coordination can eliminate the problem. Call the 8 TDCS, Current Operations or the 2d Air Delivery Group and coordinate the rendezvous or get the big picture about the other individuals conducting the rendezvous.

Unlike many tanker crews who see the mission package the morning prior to departure, the 8 TDCS has mission planned and coordinated their arrival/position two to three weeks in advance. Any questions on anyone's part can be answered or researched either by the tanker task force folks or the 8 TDCS.

How can you help us?

- Keep your beacon on after the tanker/fighter rendezvous. This enables **Headdancer** to rendezvous and maintain proper position.
- Tune and keep set briefed/coordinated air to air TACAN frequencies. This enables all cells to know the distance of **Headdancer** from each cell.
- If spare radios are on board, set prebriefed, common or interplane frequencies. The KC-10 usually uses 143.45 or 123.45.
- Drop by and look at our airplane and see what we have. Ask some questions and get a better idea of our mission.

What **Headdancer** can do for you!

- We have four UHF and four HF radios on board. We maintain a listening watch of all air refueling frequencies and intercell frequencies.
- We have a weather officer that updates abort and landing bases hourly. We can pass current/forecast weather to fighters and tankers.
- The mission director and tactical air monitor are the fighter experts. They will provide the necessary information and assistance to the tankers and fighters in case of problems.
- We can and will provide limited CAP support in case of ditching.
- All of the front end flight crews in the 8 TDCS are experienced SAC crewmembers. We've all been involved in the fighter deployments from both ends. So we really are familiar with the tankers' role and mission/capabilities.
- We are there to HELP.

*Hopefully this brief article has cleared up who **Headdancer** is. There are still many aspects of our mission not mentioned here so if you have questions, feel free to call us at AV 884-5188.*

DUCKBUTT, Where Are You?

Capt Patrick T. O'Brien
379 BMW, Wurtsmith AFB

"Tankers don't fly enough cell," was my thought as I sat in the briefing room at RAF Fairford, England, early one summer morning. My crew and I were wrapping up a 52-day TDY at the European Tanker Task Force and I had been selected as cell lead of a three-ship tanker cell. We were supporting a Coronet East redeployment to the CONUS and, as with most of us these days, this was my yearly opportunity to do some honest to goodness operational cell work.

"Piece of cake," I mused when the staff briefer told us we would be using three tankers to take only two F-4s across the pond. My number two man and I would land at Pease, while the number three tanker was a round robin back to Fairford. Nearing Canada, we would rendezvous with a Loring tanker and the fighters would continue on to their home base.

Uncharacteristically for a redeployment, everything went like clockwork: on time cell departure, textbook rendezvous with the fighters, and right on the fuel curve. "We just might get back home to Wurtsmith today after all," I suggested, three hours into the flight. His offload complete, number three departed the cell and headed back to Fairford.

Then it happened! The number two tanker had just finished refueling both receivers. Suddenly, the number two fighter mumbled to his leader that one of his engines was losing oil pressure — **FAST.**

"We've got a problem here," the lead fighter relayed to me.

"Get ready to divert," I told my crew as I considered the worst case condition.

Sure enough, the fighter wingman had to shut down an engine. "We're descending," fighter lead told me. I knew what we had to do. Since we had not, as yet, offloaded any of our fuel we were in the better position to divert. The number two tanker reminded me of his 27 passengers compared to my one, making my decision an easy one. I told my wingman to continue on to Pease and started my own descent to escort the fighters to their nearest suitable alternate: Keflavic, Iceland.

What followed was a beautiful team effort. My copilot declared our receiver's emergency with Gander Oceanic. The navigator updated his INS and charted our diversion course. The boom operator shifted into tactical mode and I flew the aircraft down — through FL240 . . . 220 . . . 180 . . . 160 and finally FL 150, 1000 feet above the fighters. At that altitude the F-4 could maintain straight and level flight with its single engine. "That water looks mighty cold," I thought as I reminded the mishap fighter crew to recheck their leg straps and seat kits.

With no tactical deployment control aircraft **(Headdancer)** in our cell, we acted as communications relay for the F-4s. With fighter lead's concurrence, we decided to scramble the search and rescue aircraft **(Duckbutt)** as a precautionary measure. I mentally reviewed what we had been briefed on an earlier mission:

Duckbutt is an HC-130 modified for search and rescue. Normally, it is on station 30 minutes prior to your passage time and either stays 30 minutes after passage or flies with you. The airplane has a full time radio operator on the crew and is equipped with dual UHF, VHF, and HF (AM and SSB) radios. In addition to the assigned enroute and mission frequencies, 121.5 kHz, 243.0 MHz, and 9018 kHz are continuously monitored. Doppler, celestial, radar, UHF and VHF DF, Loran A and Loran C are standard on the airplane. Unable to land on the water, the aircraft carries survival equipment that can be airdropped including parachute flares, sea dye markers, electronic marker buoys, flotation gear, food, water and first aid supplies. In addition, two pararescue specialists are onboard.

If the fighter crew punched out, we were also prepared to jettison some of our own emergency equipment to them and remain in orbit until help arrived. As I feared, we were unable to reach Duckbutt on either UHF discreet (305.4 MHz) or Guard frequencies. We also tried HF Guard —8364 kHz), but to no avail. Mildenhall Giant Talk was unable to establish a phone patch with Keflavic although they passed our diversion information to HQ TAC, HQ 8AF, HQ 3AF, and RAF Fairford. Neither Gander nor Shanwick Oceanic seemed familiar with the term. Finally, my copilot scrambled Duckbutt through Gander's relay to Iceland via their land line. WHEW!

By kicking in and out of afterburner, the single-engine fighter was able to refuel with us to ensure his recovery into Iceland. At the lower altitude, we offloaded twice the amount of fuel to the fighters than was scheduled to get them to the CONUS.

After arriving at Keflavic, and still in contact with Duckbutt and approach control, we remained in a low orbit 10 to 20 miles from the field until both fighters had safely landed, despite (as Murphy would have it) construction on one end of the only useable runway and a 700 foot ceiling.

Prior to the last fighter's landing, the SAR aircraft informed me that he had a phone patch with Fairford and that I was to recover at RAF Mildenhall. Confirming this myself with Fairford and discovering that HQ 8AF had also authorized the 960 NM diversion, I had my navigator plot the most direct route of flight, update our enroute, destination and alternates' weather and check NOTAMs. My copilot determined that with our present 40,000 pounds of fuel, by recovering at FL 410 (thank goodness for quick dons!) we could land at Mildenhall with the required fuel reserves. So back we went to Merry Olde England.

"I guess we'll just have to get our cell work another day," I thought to myself as I shut down our engines at Mildenhall. Another day in the life of a SAC combat crew.

CFIC KC-135
in Mounta

Capt M
93 CF

"I can see a helicopter two to three miles to the east . . ."

"It's now a mile away, but going in the opposite direction . . ."

"Mr Gabler, this is Raid One Seven, did the helicopter see you?"

"The helicopter is half a mile away and heading toward me."

"Mr Gabler, does the helicopter show any signs of visual recognition?"

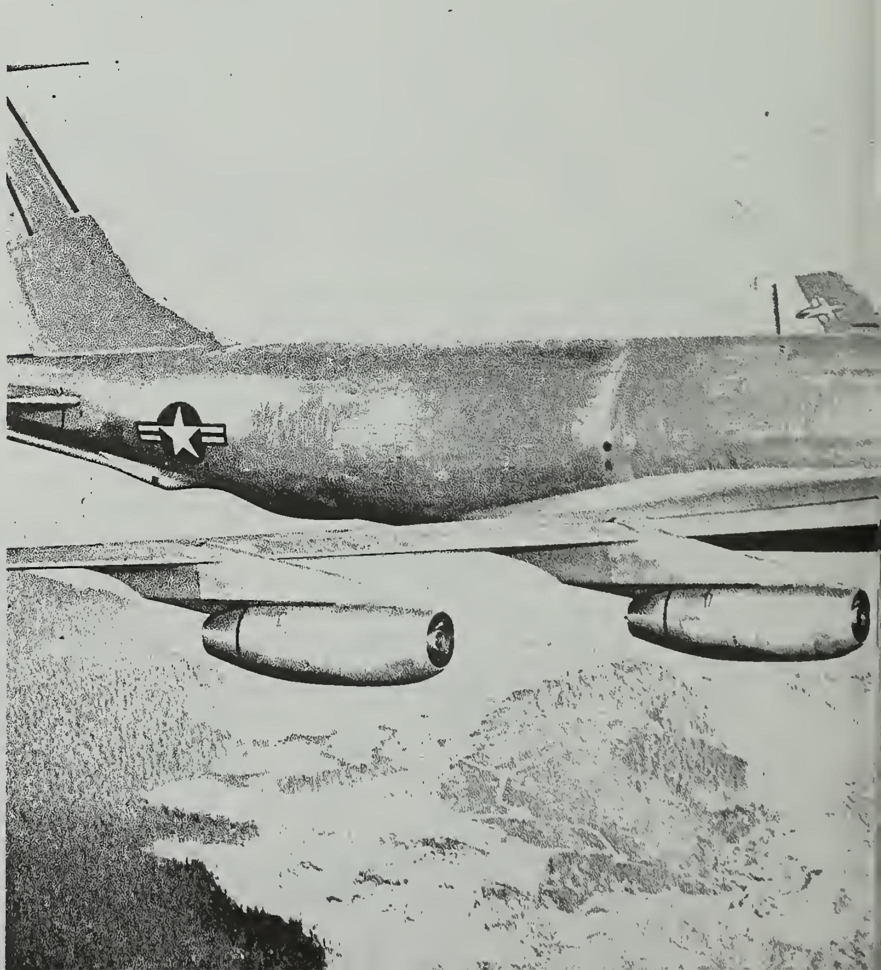
"Raid One Seven, the helicopter is circling overhead; he sees me!"

So ended a 90 minute adventure for one of Castle's KC-135 aircrews. After completing a celestial navigation training leg at Mono Lake, California, the crew of Raid One Seven heard calls for help being transmitted by someone on the ground and being answered by another CFIC KC-135. When the first airplane lost radio contact, Raid One Seven assumed primary communication. It was soon discovered that a hiking party had fallen upon misfortune; one of its members had a broken leg and was unable to walk. The accident occurred in high mountainous terrain, approximately 55 miles east of Fresno, California, at an altitude of 11,400 feet. Air rescue was the only alternative.

The first major problem the Castle aircrew encountered was to precisely locate the hiking party. Mr. Gabler, a hiker with an emergency radio, relayed his position as N41-05 W119-40, and gave several geographic landmarks. The crew on Raid One Seven quickly plotted the coordinates and sought to find the land references. Two problems became readily apparent: the landmarks depicted on Mr. Gabler's hiking map were not to be found on One Seven's jet navigation chart, and the geographic coordinates indicated a terrain elevation much lower than that relayed by Mr. Gabler. After further investigation, Mr. Gabler changed his latitude to N37-05. Experience and intuition told the aircrew that the coordinates were still incorrect. After another try, Mr. Gabler established his position as N37-03 W118-45. The crew concurred, and armed with this information the rescue portion of the operation began.

While the crew of Raid One Seven pinpointed Mr. Gabler's position, it simultaneously worked with Fresno Flight Service Station. A Coast Guard Rescue C-130 was called in from a training mission over the Pacific Coast, and a California Highway Patrol helicopter was vectored toward the rescue area.

The crew of Raid One Seven instructed Mr. Gabler's party to establish ground signals using any brightly colored object. They also reminded him that a mirror or similar shiny object



Crew Assists
n Rescue

Filler
1W

would improve his chances of being seen.

Communication between the CHP helicopter and the KC-135 was impossible due to incompatible radio equipment. Not to be dissuaded, a civilian aircraft was vectored in to relay information. During the final minutes of the rescue, lines of communication often went from Mr. Gabler on the ground to the crew of Raid One Seven, to Fresno Flight Service Station, to the civilian aircraft, to the CHP helicopter.

Minutes after arriving on the scene, the Rescue C-130 prepared to air drop "long-life" emergency radios to the hikers. The CHP helicopter found a suitable landing site, and soon the injured hiker was on his way to the hospital.

In the end, all of the clues were sorted out, the facts were established and the rescue was accomplished without a problem.

The primary mission of Raid One Seven was to train future instructors for the Strategic Air Command but when another duty beckoned they rose to the challenge and accomplished the task in a typically professional manner.

Members of the crew were Captains Michael H. Laney, Michael R. Filler, Clark K. Nelsen, Virgil H. Pingsterhaus; First Lieutenants Grant McMillin and Christopher D. Campbell; Technical Sergeant James R. Hammaker; and Staff Sergeants Kevin D. Hershey and Ernest F. Albrittin, Jr.

Post Script: None of the crewmembers that participated in this mission had any formal training in rescue operations. However, they successfully accomplished the task in a minimum amount of time. Here are some of the lessons they learned:

- Together as a crew, they flew the aircraft, then gathered and assimilated all of the pertinent facts.
- Communications problems (due to the incompatibility of UHF and VHF radios), although frustrating, did not substantially hamper the operation.
- Survival techniques that are almost second nature to us may not be even vaguely apparent to the "civilian survivor."
- Documentation of our position and the quality of radio transmissions kept us within voice contact with the hiking party.
- Flexibility was the key to success. None of us had prepared to orchestrate a rescue operation, but alertness and creative problem solving enabled us to get the job done.

This 90 minute "detour" in the training sortie provided the injured hiker with the medical attention he required and gave us an extra feeling of accomplishment.

Don't Get Frost-Bitten!

1Lt William L. Erickson
92AREFS, Fairchild AFB

"Well that's about it. If there are no questions, we'll see everyone tomorrow and remember we're in winter operations so we'll show up two and one-half hours prior to takeoff instead of the usual 2:10."

As I was putting away my Dash One, I thought that winter operations must mean more than just an earlier bus. Now that cold weather was upon us. I decided to make a list of things to be concerned about.

I decided the best place to begin avoiding all those little gotchas that can happen during winter is during mission planning. So for number one on my list I wrote:

- Copilots should spend a little extra time working on takeoff and landing data for different conditions.

How many times have you arrived at base ops only to find out that your takeoff data is no good? Now it's a mad rush to compute new data. Having some additional takeoff data (anti-ice, wet runway, 30 flap) computed ahead of time to compare with your updated data can keep you from making a big mistake when you're holding short of the runway at night with a flashlight in one hand and your performance manual in the other.

- Winter weather can mean using unfamiliar alternate airfields.

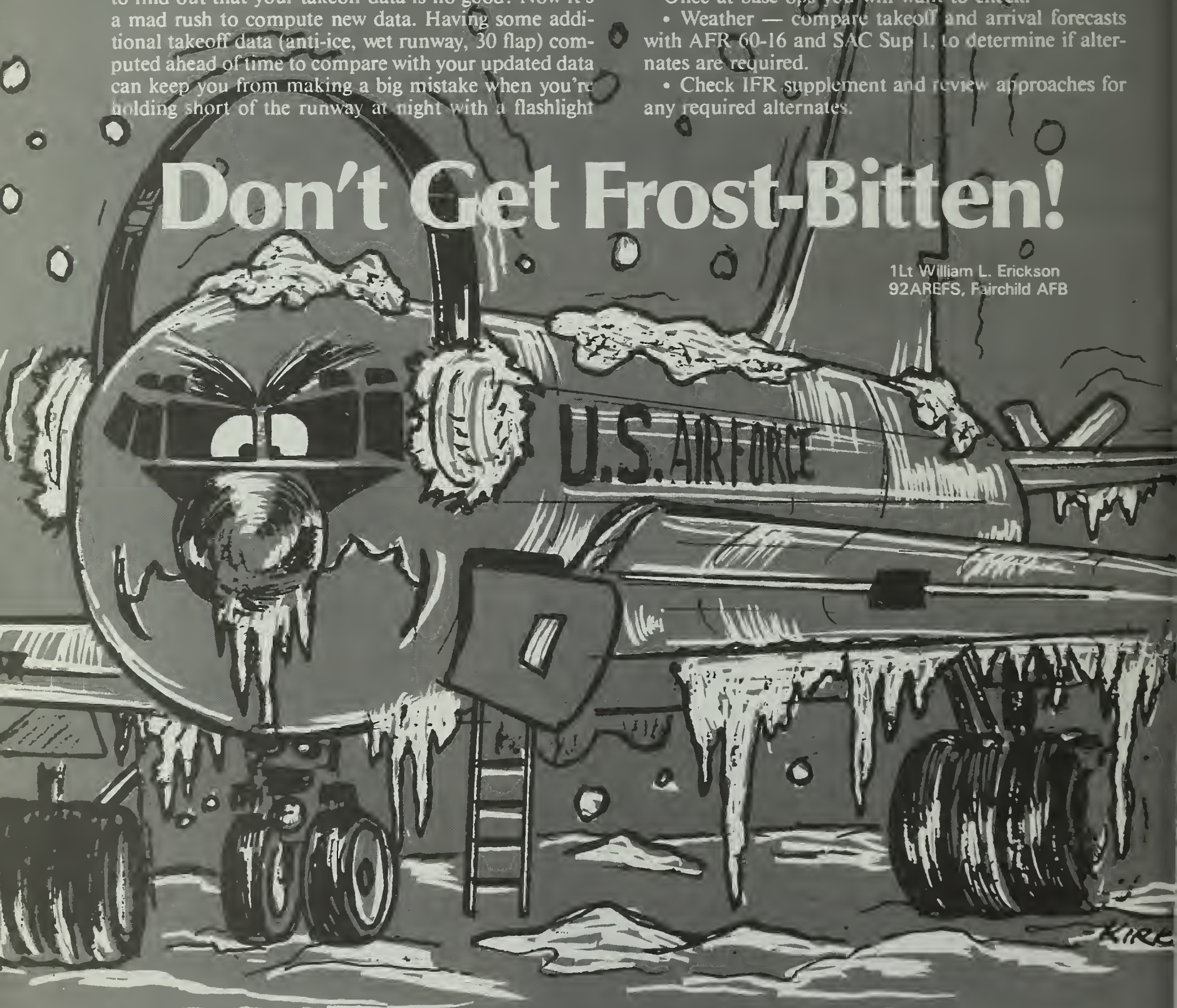
During mission planning take an extra 10 minutes and review approach plates to possible alternates. The navigator can also review charts necessary to reach divert bases.

- Each crewmember/passenger should insure they have the required cold weather clothing required by SACR 55-51.
- As mentioned before, schedule an earlier than normal bus to provide a few extra minutes to compensate for the little extras caused by cold weather.

On your way to base ops, you might want to stop by the aircraft. This lets the aircraft commander call for de-icing if it has not been done to his/her satisfaction.

Once at base ops you will want to check:

- Weather — compare takeoff and arrival forecasts with AFR 60-16 and SAC Sup 1, to determine if alternates are required.
- Check IFR supplement and review approaches for any required alternates.



Once you've arrived at the aircraft, you will begin to feel the cold that has been working to thicken the aircraft's oil and shrink its seals. The preflight, then, is your next major opportunity to correct potential problems. Check for:

- Snow and ice chunks in front of the engines that might be ingested. Also check that all turbine wheels rotate freely.
- Pitot tubes, static ports and EPR probes free of ice and snow.
- Condition of landing gear microswitches. Moisture collected in these switches can freeze and prevent gear retraction.
- Proper de-icing of the aircraft. If de-icing is accomplished while you are at the aircraft, make sure the elevator trim is set 2.5 units nose down. Do not allow ice to be chipped or scraped from the aircraft. And remember, takeoff should be made within 30 minutes of the de-icing application.

Prior to starting engines, actuate brakes several times with increasing pressure before setting them. Ground heat may be required to warm the starter valve, fuel control unit and ignition unit. If temperature is below −22 degrees F, engines should idle for two minutes before changing the throttle position. If using engine bleed air for the start, be alert for the aircraft sliding on slippery ramps as power is run up. If ramps are slippery, advance your engine only enough to close the surge bleed valve, but not less than 1.85 EPR. Bleed valve closure must be determined by the ground crew and reported to the pilot. This will provide sufficient air for starting the remaining engines. Once the engines are started check:

- Oil pressure — oil pressure may be high or low. With slightly increased oil pressure you may want to leave the throttle in idle until the engine warms up. If you have a minimum indication, you may allow up to three and one-half minutes for a normal indication.
- Consider a delay in closing the generator switches for five minutes when the temperature is below 30 degrees F.
- Monitor flap position indicators when operating the flaps at low temperatures; the flaps may stall.

During the taxi phase proceed slowly and avoid deep snow or slush if possible. Avoid using inboard engines above idle to prevent blowing slush or chunks of ice against the bottom of the wings and fuselage. If taxiways are snow and slush covered, you may want to retract flaps until just prior to takeoff to prevent damage during retraction due to ice buildup. Expect taxiing to take longer so begin a few minutes early to make an on time takeoff.

On takeoff, the pilot may elect to make a static takeoff due to weather or safety conditions. A static takeoff allows you to stabilize the EPR sooner which gives you more runway available for takeoff. If the airplane starts to slide when you advance power, immediately release brakes and begin the takeoff roll.

Additional considerations for takeoff include:

- Insuring water is heated to at least 60°F when ambient temperatures are between 20-40°F. Water will not be used when ambient temperature is below 20°F.
- Using an RCR of four for takeoff planning when runway is slush covered. Takeoffs will not be made with RCRs of less than four.
- Not attempting takeoff if slush or water puddles exceed one-half inch in depth.
- Maintaining the most effective CG. On slippery runways, nose gear steering becomes more effective with a CG of approximately 23%.
- A final physical check of the control surfaces if freezing precipitation is severe. This should be made just before takeoff to be sure the controls are still free of ice.

In the climb out phase, engine anti-ice should be used when climbing in clouds at temperatures near freezing or less. Operate engines at as high a power setting as practical to provide increased anti-icing capability. The aircraft should not be flown in moderate icing conditions for longer than 10 minutes and should never be flown into known or suspected heavy icing conditions.

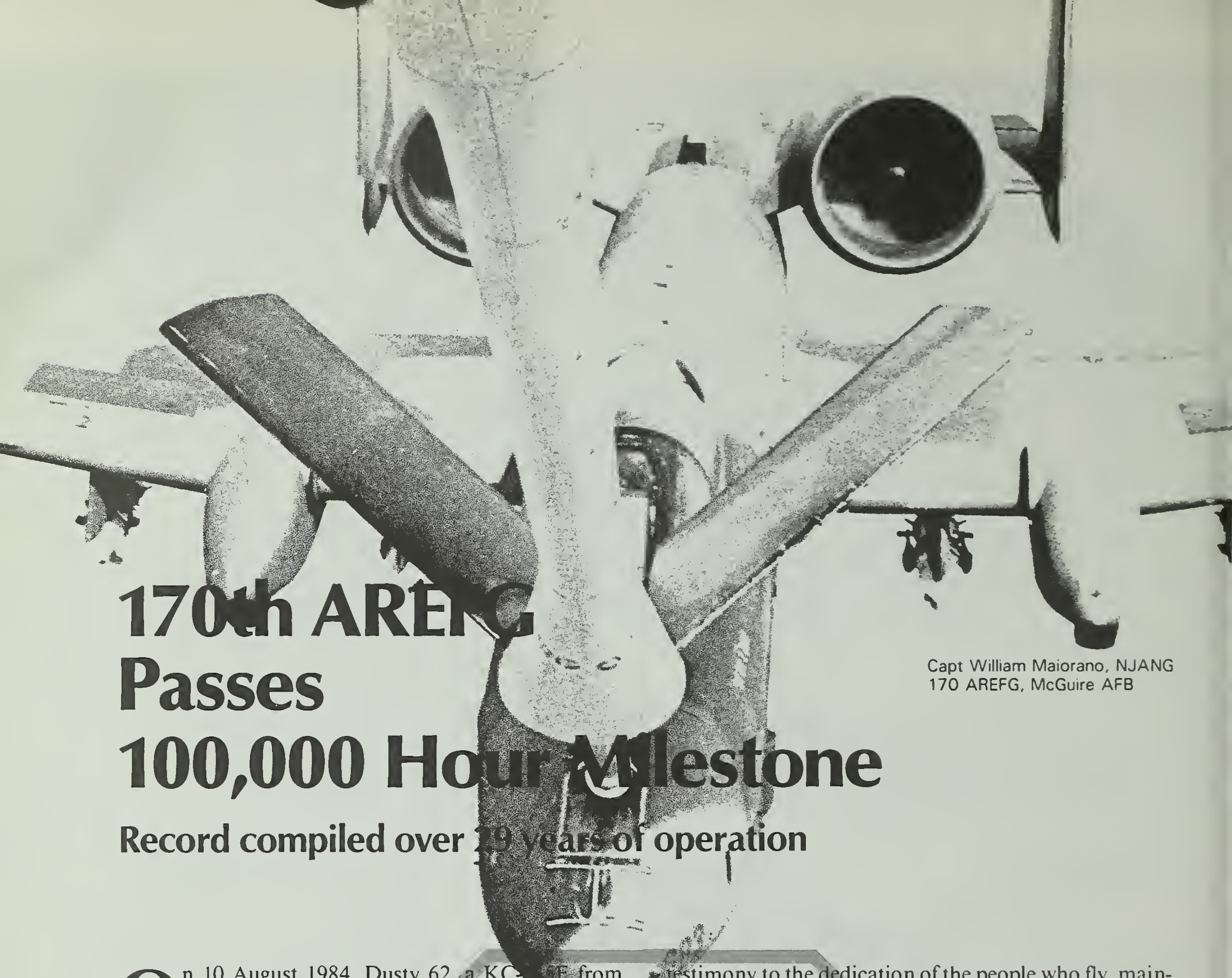
If ice accumulates on the engine due to an anti-icing system malfunction or exceeding the anti-icing capability, operate the engines at the minimum thrust required. After leaving the icing conditions, turn off anti-icing which will allow ice to sublime rather than break off and be ingested by the engines.

Check the weather at your arrival base prior to penetration to see if you need to divert. No sense in wasting fuel by descending only to have to climb back up to altitude. If icing conditions are anticipated, turn the anti-icing on at least 10,000 ft above the highest icing level in order to provide adequate warm up time. Maintain at least 80% RPM to insure adequate anti-icing airflow.

Well, you've checked the weather, completed landing data and reviewed the approach. Now its time to think about landing in the cold weather environment. Remember:

- Ice formation on the airplane will increase the stalling speed, therefore the pattern, approach and threshold speed should be increased for ice formations of less than one inch thickness. Increase pattern, approach and threshold speeds by five knots. For formations of one to two inches increase speed 10 knots, and 15 knots for ice more than two inches thick.
- If runways are slush covered, retract flaps after touchdown.
- If stopping distance is critical, cut the inboard engines after touchdown. This can significantly reduce your ground roll. Make sure you get the right throttles and be sure the number one generator is operative prior to cutting throttles.
- When conditions permit, consideration should be given to making a low approach to visually observe conditions.
- After landing, if taxiways are slippery and present a hazard, request a tow.

This review has hit the high points of cold weather operations. You can probably add to the list based on your own experience. The point is, there is more to operating in winter conditions than showing up a few minutes early for the bus. **The extra effort will result in a safe successful mission.**



170th AREFG Passes 100,000 Hour Milestone

Record compiled over 29 years of operation

Capt William Maiorano, NJANG
170 AREFG, McGuire AFB

On 10 August 1984, Dusty 62, a KC-135E from the 170th Air Refueling Group, NJANG, launched on an historic air refueling mission. The flight put the 170th AREFG over 100,000 hours of flying without a class A aircraft mishap. Even more impressive is the fact that this record was compiled over 29 years of operations in the heart of the nation's busiest airspace.

The 170th AREFG began operations at Newark Airport, NJ, in 1956 and moved to its present location at McGuire AFB in 1965. The unit has flown C-46's, -119's, -121's, -7A's and the current aircraft, the KC-135E. With these different aircraft came various commitments. The group's mission included air transport, aeromedical transport, tactical airlift, and now strategic air refueling. Attaining the safety record with so many changes in the unit and in aviation over this time span is truly remarkable. But the real story behind the record is the people of the 170th AREFG.

Major General Francis R. Gerard, chief of staff, New Jersey Department of Defense had high praise for the men and women of the 170th. He said the record is "a testimony to the dedication of the people who fly, maintain, and support the aircraft." Maj Gen Gerard cited the years of professional commitment that many people made as guardsmen and full-timers in the 170th. Many of the unit's leaders referred to the long term association of the unit members as a key to the safety record. Colonel Neil D. Kennedy, commander of the 170th, said, "The experience level of the people is very high. They know their jobs extremely well; and they also know that safety does not just get lip service in the 170th. We have had the luxury of retaining quality people for many years. There are 14 current members of the unit who were active guardsmen when the unit received its federal recognition on 1 February 1956. We all have a real desire to protect our most important resource — those who work with us. We are extremely proud of our safety record and will continue to foster the proper attitude." The DO, Lt Col Joseph W. Raymond, echoes the advantages the 170th has in its experience level. While in years past guardsmen were referred to as "weekend warriors", Lt Col Raymond points out that the present SAC commitment is a seven day a week, 24 hour a day job, and "We benefit greatly from the expertise our people

Flight Crew of 100,000 hour mission and NJ Chief of Staff: (L-R) MSgt Charles Diffenderfer, BO; Capt William Maiorano, CP; Maj Gen Charles J. Young, Jr., commander NJANG; Maj Gen Francis R. Gerard, chief of staff, NJDOD; Col Neil D. Kennedy, P, commander, 170 AREFG; MSgt Michael Carroll, BO; SMSgt Irving Green, BO; and Lt Col James McIntosh, N.

bring in from the different civilian industries." He added, "We also have quality maintenance that we can and do depend on. You can say that the 170th has been lucky all those years, but we've made our luck."

On the maintenance side of this record, I asked Lt Col Michael Fevola, assistant chief of maintenance, who has been with the 170th for 20 years, how he accounts for quality maintenance over so many years and changes. He said the thing that impresses him the most is the "individual integrity of the people to get the job done right." He sees the pride the maintenance troops have in knowing that they are dependend upon, and that this pride and integrity has been passed on through the years to new personnel.

However, all of these accolades are not to make the 170th seem like a fairy tale land of perfection. The unit has been through the normal ups and downs that one would expect in 29 years; but it's been done safely.

As a new chief of safety, I'd like to point out what I see as the reason for this success. First, we must remember that almost every mishap is the culmination of several factors and if just one of those factors can be removed, often a tragedy will be averted. In the 170th we realize that despite our experience we are human beings and we make mistakes. We know that more than once in the past 29 years situations developed where we were "set up for an accident." I feel the single largest factor that enabled us to avoid disaster is an attitude that permeates the 170th. This "safety attitude" has been our stop gap. It means that somewhere along the line; in daily standup, in the engine shop, in the aircraft or wherever; somewhere in the whole process of flying airplanes someone recognized and removed one of the factors that could have caused an accident. Often the key act seems very insignificant by itself but we know that the realization of the importance of all our jobs has earned us this record. We also know that in addition to the hazards of flying air refueling missions out of the New York and Philadelphia areas, we now face one of the worst hazards of all — complacency. We will constantly remind ourselves that our 100,000 hour mark is in the past; and we look to our day to day operations as we have the past 29 years. Hopefully, we can maintain our attitude and pass it on to the next generation of guardsmen. If we can, I'm sure I'll see the day when I read about the 170th celebrating 200,000 hours of accident-free flying.

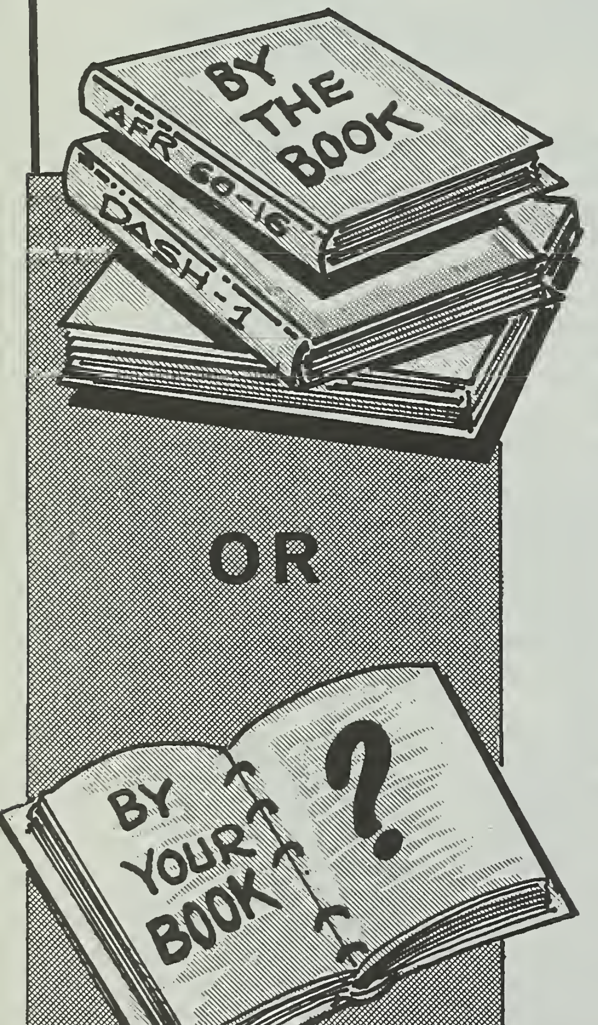
HONOR ROLL

The 170th Air Refueling Group prides itself on the long term commitment its members give. The following people have been with the 170th since its formation in 1956. They comprise one of the common threads in the unit's safety record, and deserve recognition for a job well done.

Lt Col Gerald Rettenberg	Clinic
Maj John F. Smith	Combat Support
CMSgt William C. Flockhart	Maintenance
CMSgt William J. Graham	Combat Support
CMSgt Irving S. Green	AREFS
CMSgt John F. Hughes	Maintenance
CMSgt John G. Weithenauer	Maintenance
SMSgt George R. Fusco	AREFS
SMSgt Christopher Krambis	Maintenance
SMSgt Wesley M. Morris	AREFG
MSgt Robert W. Forman	Maintenance
MSgt John P. Gomez	AREFG
MSgt Peter W. Koch	Maintenance
TSgt Bruce J. Slicker	Resource Management

Double Standards

Ed Note: *This article was originally submitted by SSgt Rand M. Sanders, IBO, 91 AREFS, McConnell. Brig Gen George Lee Butler, SAC IG, was so enthusiastic about the subject that he climbed on board and added several thoughts from his perspective.*



One of my pet peeves — and the cause of untold potential and actual mishaps — is what I call the "double standard," also known as, "Forget that stuff they taught you in school, this is the way we do it around here." What leads to this kind of attitude? Where do people get the idea they can just ignore the book and follow their own personal way of doing things? Let me tell you about some of the traps I've seen over the years and the lame excuses we've all heard that go along with them.

Probably the worst is the "TDY syndrome," which usually starts with a comment like, "I can't wait to go TDY and get away from QC for awhile." That frame of mind is an accident waiting to happen. It affects aircrews and crew chiefs alike. Here's an example I ran into on a recent TDY.

During preflight, I was working on the checklist step, "Cargo and Loose Equipment — Secure," which is obviously designed to keep loose objects from becoming lethal in the event of an emergency. When I looked behind the galley, I found a pile of spare parts, rags, and other miscellaneous equipment beneath a placard that reads. **"WARNING/EMERGENCY PRESSURE RELIEF VALVE.** KEEP CLEAR." No personal or loose baggage to be in area during operation." I had already resecured several items in the airplane that were obvious hazards. When I asked the crew chief to find a place to secure his equipment, his reply was, "Man, we're TDY. Are you really going to bother me with that stuff?" I answered, "Yes." "This is totally unnecessary," he said. "This airplane has flown 23 times and no one else has said anything about it."

I wondered if this guy maintained his airplane like this back at his home base. Imagine surviving a crash landing only to be struck down by loose trash, or having a passenger injured by unsecured equipment during turbulence.

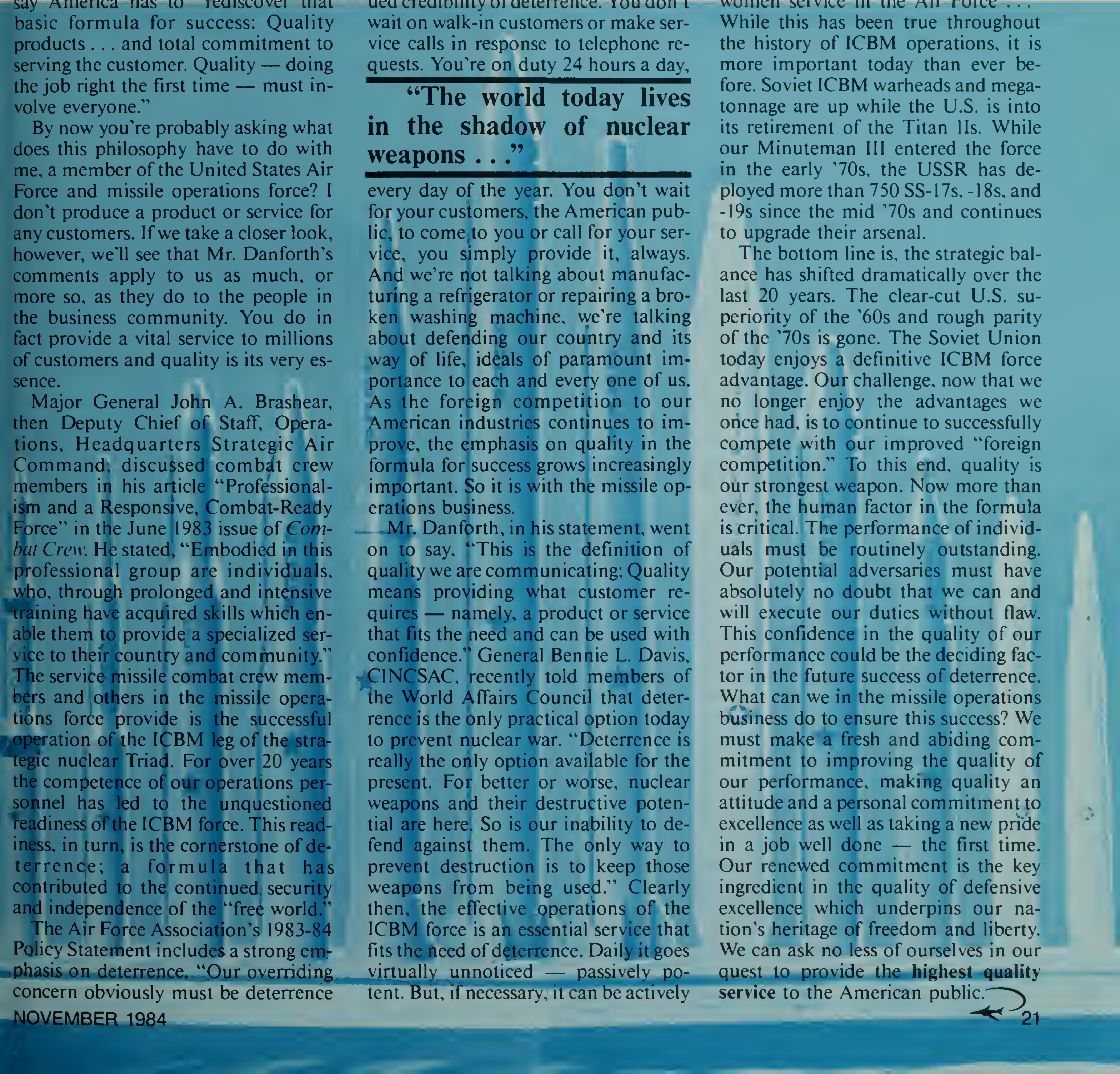
The point is, there are no "special" TDY safety procedures. Safety is a 24 hour affair and that goes for "TDY preflights" back at home station, rushing to get a plane off the ground in a short time. Sure, strip alert is a time for an expedient preflight and launch. But when was the last time you pulled strip alert for a routine training sortie?

So, whether you're TDY or at home station, before you start cutting corners think about the consequences and if rushing is really justified. Higher headquarters missions are a license to steal, for some, when it comes to procedures. "The mission comes first." "Let's just do what we can to get airborne on time." Bad things can happen inside an

Cont'd on page 24

Capt David J. Bertholf 3901 SMES, Vandenberg AFB

QUALITY IN MISSILE OPERATIONS



Mr Douglas D. Danforth, chairman of the Westinghouse Electric Corporation said in a recent policy statement, "We've lost sight of a simple formula for success in business, one which has worked since the dawn of commerce — good old fashioned customer trust in the quality of a product or serve." He went on to say America has to "rediscover that basic formula for success: Quality products . . . and total commitment to serving the customer. Quality — doing the job right the first time — must involve everyone."

By now you're probably asking what does this philosophy have to do with me, a member of the United States Air Force and missile operations force? I don't produce a product or service for any customers. If we take a closer look, however, we'll see that Mr. Danforth's comments apply to us as much, or more so, as they do to the people in the business community. You do in fact provide a vital service to millions of customers and quality is its very essence.

Major General John A. Brashear, then Deputy Chief of Staff, Operations, Headquarters Strategic Air Command, discussed combat crew members in his article "Professionalism and a Responsive, Combat-Ready Force" in the June 1983 issue of *Combat Crew*. He stated, "Embodied in this professional group are individuals, who, through prolonged and intensive training have acquired skills which enable them to provide a specialized service to their country and community." The service missile combat crew members and others in the missile operations force provide is the successful operation of the ICBM leg of the strategic nuclear Triad. For over 20 years the competence of our operations personnel has led to the unquestioned readiness of the ICBM force. This readiness, in turn, is the cornerstone of deterrence; a formula that has contributed to the continued security and independence of the "free world."

The Air Force Association's 1983-84 Policy Statement includes a strong emphasis on deterrence. "Our overriding concern obviously must be deterrence of the most destructive form of conflict, nuclear war. The world today lives in the shadow of nuclear weapons . . . this nuclear shadow has prevented conventional war between major nations for thirty-eight years, the longest period in modern history." I can think of no greater service to your community and country than ensuring the continued credibility of deterrence. You don't wait on walk-in customers or make service calls in response to telephone requests. You're on duty 24 hours a day, every day of the year. You don't wait for your customers, the American public, to come to you or call for your service, you simply provide it, always. And we're not talking about manufacturing a refrigerator or repairing a broken washing machine, we're talking about defending our country and its way of life, ideals of paramount importance to each and every one of us. As the foreign competition to our American industries continues to improve, the emphasis on quality in the formula for success grows increasingly important. So it is with the missile operations business.

"The world today lives in the shadow of nuclear weapons . . ."

Mr. Danforth, in his statement, went on to say, "This is the definition of quality we are communicating; Quality means providing what customer requires — namely, a product or service that fits the need and can be used with confidence." General Bennie L. Davis, CINCSAC, recently told members of the World Affairs Council that deterrence is the only practical option today to prevent nuclear war. "Deterrence is really the only option available for the present. For better or worse, nuclear weapons and their destructive potential are here. So is our inability to defend against them. The only way to prevent destruction is to keep those weapons from being used." Clearly then, the effective operations of the ICBM force is an essential service that fits the need of deterrence. Daily it goes virtually unnoticed — passively potent. But, if necessary, it can be actively employed with a confidence born from proven proficiency.

The AFA policy also stated, "The cause of deterrence is served best by increasing the war fighting capabilities of the armed forces. In turn, these capabilities must be built on . . . first and foremost, the dedication, motivation, and professionalism of the men and women service in the Air Force . . ." While this has been true throughout the history of ICBM operations, it is more important today than ever before. Soviet ICBM warheads and megatonnage are up while the U.S. is into its retirement of the Titan IIs. While our Minuteman III entered the force in the early '70s, the USSR has deployed more than 750 SS-17s, -18s, and -19s since the mid '70s and continues to upgrade their arsenal.

The bottom line is, the strategic balance has shifted dramatically over the last 20 years. The clear-cut U.S. superiority of the '60s and rough parity of the '70s is gone. The Soviet Union today enjoys a definitive ICBM force advantage. Our challenge, now that we no longer enjoy the advantages we once had, is to continue to successfully compete with our improved "foreign competition." To this end, quality is our strongest weapon. Now more than ever, the human factor in the formula is critical. The performance of individuals must be routinely outstanding. Our potential adversaries must have absolutely no doubt that we can and will execute our duties without flaw. This confidence in the quality of our performance could be the deciding factor in the future success of deterrence. What can we in the missile operations business do to ensure this success? We must make a fresh and abiding commitment to improving the quality of our performance, making quality an attitude and a personal commitment to excellence as well as taking a new pride in a job well done — the first time. Our renewed commitment is the key ingredient in the quality of defensive excellence which underpins our nation's heritage of freedom and liberty. We can ask no less of ourselves in our quest to provide the **highest quality service** to the American public.

PROFESSIONAL PERFORMERS

Aircraft Maintenance

SSgt Julio Riveracollazo, 376 SW, Kadena AB, is SAC's Maintenance Airman of the Month. Sgt Riveracollazo has distinguished himself as a master technician and true maintenance professional in every respect. As a shift chief in the automatic flight control shop, he has helped to produce an increased systems capability rate for the KC-135 autopilot, N-1 and J-4 compass systems. His ability to detect, analyze and repair autopilot system malfunctions has gained him a reputation, throughout the wing, as the autopilot expert. During a Safe Haven weather evacuation to the Philippines, Sgt Riveracollazo was faced with an intermittent, uncommanded pitchdown malfunction on a KC-135Q. Many hours of troubleshooting by different specialists could not confirm the reported discrepancy. Through logical thinking and sound troubleshooting, Sgt Riveracollazo isolated the malfunction to a faulty elevator servomotor ground wire. He temporarily repaired the wiring harness until it could be properly repaired at home base. Upon return from the deployment site, Sgt Riveracollazo supervised the complete rewiring of the servomotor wiring harness. This decisive action resulted in the complete repair of the autopilot system of a valuable airframe.

Missile Maintenance

Ssgt Janice E. Braxton, 351 SMW, Whiteman AFB, is SAC's ICBM Maintenance Airman of the Month.

Assigned to the team training branch as a facility/periodic maintenance trainer, Sgt Braxton ensures maintenance technicians receive the highest quality training on the power systems and environmental control systems (ECS) of the Minuteman II launch facilities and launch control facilities. Sgt Braxton also maintains her own high level of expertise through frequent proficiency dispatches. Her proven maintenance abilities, extensive weapon system knowledge and exemplary instructional skills directly contributed to the maintenance deputate's "best ever performance" and to her own highly qualified, error-free rating received on a 3901st SMES Instructor Proficiency Evaluation.

Sgt Braxton's technical expertise has been recognized on several fronts. She was commended by the base project manager and by the contractor for her professional performance during all phases of an extensive modification to the ECS at each launch facility. She was also selected to verify procedures for time-compliance technical order changes affecting the launch facility power generation systems. Her experience and foresight led to the discovery of many problems with the procedures. They were quickly identified to maintenance control managers for appropriate resolution.

Missile Crew

Crew R-135, Capt Danny C. Jaggers, MCCC, and 2Lt Joseph A. Perkoski, Jr., DMCCC, 351 SMW, Whiteman AFB, is SAC's Missile Crew of the Month. Immediately upon assuming alert at Foxtrot-One LCC, Crew R-135 was confronted with multiple security situations within their flight area. While the crew was coordinating the Alert Response Team (ART) reaction to these security situations, Mike-One LCC encountered environmental control system problems necessitating transfer of their timeslot and flight responsibility to Foxtrot-One. Along with the intricate process of realigning communications monitoring and EWO responsibilities to establish optimum weapon system and EWO capability, Crew R-135 was now also confronted with total responsibility for two flights. During this deluge of status, the crew received fire indications in the AFSATCOM rack. Realizing the potential danger to the equipment and crew, Capt Jaggers and Lt Perkoski immediately processed the LCC Fire Checklist and isolated the SATCOM control panel. It was their quick, decisive actions and superb weapon system knowledge which averted a hazardous situation. After close coordination with all other squadron LCCs, Crew R-135 again reassigned communications monitoring to maintain squadron EWO capability.

During this hectic status-ridden alert, Lt Perkoski was being observed by a wing standardization division evaluator. In the midst of this evaluation, Crew R-135 was processing an emergency action message (EAM) when a sortie in another flight dropped status out. After completing all EAM actions, the crew transitioned to the status out procedure. Capt Jaggers and Lt Perkoski met the stringent timing criteria of the status out procedure, even though they were delayed by EAM processing. Meanwhile, the crew maintained critical weapon system and EWO capability of the LCC in spite of heavy maintenance. It was Crew R-135's superior performance, reflecting superb technical expertise and indepth knowledge of the Minuteman weapon system, that accounted for the error-free rating given by the evaluator.

Flying Crew

Training Flight Crew, 11 AREFS, Altus AFB, is SAC Flying Crew of the month. Crew consists of Maj Robert F. Watson, IP; Capt Catherine D. Smith, FP; Capt Roger A. Shuman, IN; 1Lt Vance S. Alm, N; and CMSgt Donald G. Kendall, IBO.

Recently, Maj Watson and crew took off at night as number two in a two ship MITO on a routine pilot upgrade sortie for Capt Smith. Shortly after passing 5000 ft the number one engine fire warning light illuminated. Notifying lead of their problem, they departed the cell turning crosswind to set up for a right VFR pattern to Altus. Seconds later, Chief Kendall visually confirmed a fire, reporting over interphone the engine was engulfed in flames. After reconfirming engine indications, the crew accomplished bold print procedures and shut down the affected engine. Although the fire switch was pulled, the fire continued with flames burning up the strut and over the leading edge of the wing. Maj Watson elected to increase airspeed and begin a descent to VFR altitude in an attempt to blow out the fire and prevent flames from burning into the wing. Upon reaching VFR altitude, the IP leveled off with no noticeable decrease in engine fire. The crew initiated fuel dumping procedures to obtain a suitable landing gross weight. However, the system did not operate correctly and Chief Kendall proceeded to the boom pod to successfully start fuel dumping by establishing "contact made." Four minutes after discovery of the emergency, the aircraft was positioned downwind abeam the runway threshhold. The smooth communications of the navigator team, Capt Shuman, the instructor navigator and Lt Alm, the student navigator, ensured proper emergency air traffic clearances and coordinated emergency response vehicles. The IP directed landing gear extension and began a seven mile base turn. Ground observers reported the flames were so intense that the tail numbers could be easily read in the night sky. Chief Kendall reported the flames still appeared to be burning over the top of the wing with burning metal debris falling from the engine. With emergency fuel dumping procedures terminated on a three mile final, Capt Smith reconfirmed final landing speeds and checklist items complete. Maj Watson accomplished a normal landing from the right seat at a gross weight of approximately 180,000 pounds. With Chief Kendall at the crew entry chute and Lt Alm at the right overwing hatch to insure a possible secondary emergency evacuation route, the IP elected to evacuate the crew through the entry chute. With the number one engine still engulfed in flames, the crew egressed uneventfully. Total flight time from fire warning indications to landing was eight minutes. The superb crew coordination and aircraft knowledge displayed by these individuals averted a catastrophic disaster and resulted in the successful recovery of the aircraft and crew.

Cont'd from page 20

airplane at times like these. Keep in mind that the whole idea behind the word "safety" is to prevent damaging or destroying equipment and, most importantly, to prevent injury or loss of life. What's the value of an on time takeoff if the flight only last 12 seconds?

Yes, double standards do come from poor discipline, especially away from the home drome, or from a misguided sense of urgency, rushing to get a bird off the ground without stopping to think about the consequences of missing a vital step in the checklist. Unfortunately, there's another equally dangerous trap, probably best labeled as the "know it all," who not only is a threat himself, but can pass along his dangerous arrogance to young, impressionable subordinates. The worst I've seen is the old head, seat-of-the-pants pilot who infects a new copilot with his cavalier attitude toward checklists, radio discipline, crew coordination and life in general. The history of flight is filled with horror stories about guys with "golden hands" and lead for brains who augered an airplane when fate served up a crisis requiring discipline rather than luck.

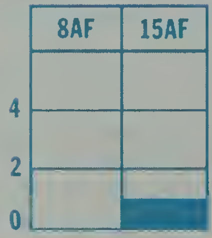
Does all this mean there's no room to improve on the book, or that written procedures have to be blindly followed? Not at all. In fact, AFR 60-9, for example, clearly states that it is the crew members' **duty** to submit recommended changes, through channels, to the flight manual manager on an AF Form 847. Further, T.O.EC-135(K)A-1 says that, "This manual provides the best possible operating instructions under most circumstances, but is a poor substitute for sound judgment." A procedure can be modified, if necessary, but only to the extent that it preserves the intent of the procedure without detracting from safety. T.O.s **can** be changed and frequently are. But, remember, new or refined procedures are the result of insight and skill, and come

SAC'S FLYING SAFETY RECORD

CLASS A FLIGHT MISHAPS

YEAR	74	75	76	77	78	79	80	81	82	83	84
TOTAL MISHAPS	8	4	4	4	1	5	4	4	2	2	1
FLYING HOURS 100,000	5.1	4.2	3.9	3.7	3.6	3.6	3.4	3.5	3.5	3.0	2.3
FATALITIES	14	7	22	10	5	1	2	14	9	7	0
RATE	1.6	1.0	1.0	1.1	.28	1.4	1.2	1.2	.58	.65	.32*

*ESTIMATED RATE BASED ON 310,000 FLYING HOURS



1984 CLASS A MISHAPS	
TR-1	JULY

CLASS B	
AUG	1
1984	3

CLASS C	
AUG	19
1984	174

FLYING HOURS	
AUG	29,912
1984	227,883

from suggestions by professionals who take time to submit a "better idea." A well-disciplined and skilled advocate of the standards can easily identify flaws in the system and take the proper steps to correct them.

In conclusion, let me pose some questions you can use to test **your** personal commitment to doing it by the book versus winging it when nobody's looking over your shoulder. While you're at it, think about how other people in your unit might react to the same questions.

One: How do you feel about check rides, or a QC evaluation? Do you worry a lot about letting a bad habit creep in? Are you uncomfortable having to go step by step through the tech order?

Two: How do you feel about evaluators? Do you see them as "black hats" who just spout rules and don't really understand how tough it is out on the line?

Three: Have you, as a supervisor, ever told a new troop, "Forget what they said in school, here's how we really do it?"

Four: Do you actively look for new ways to do things and submit recommendations through channels?

Five: Are you willing to stand up and confront someone who's deviating from proper procedures?

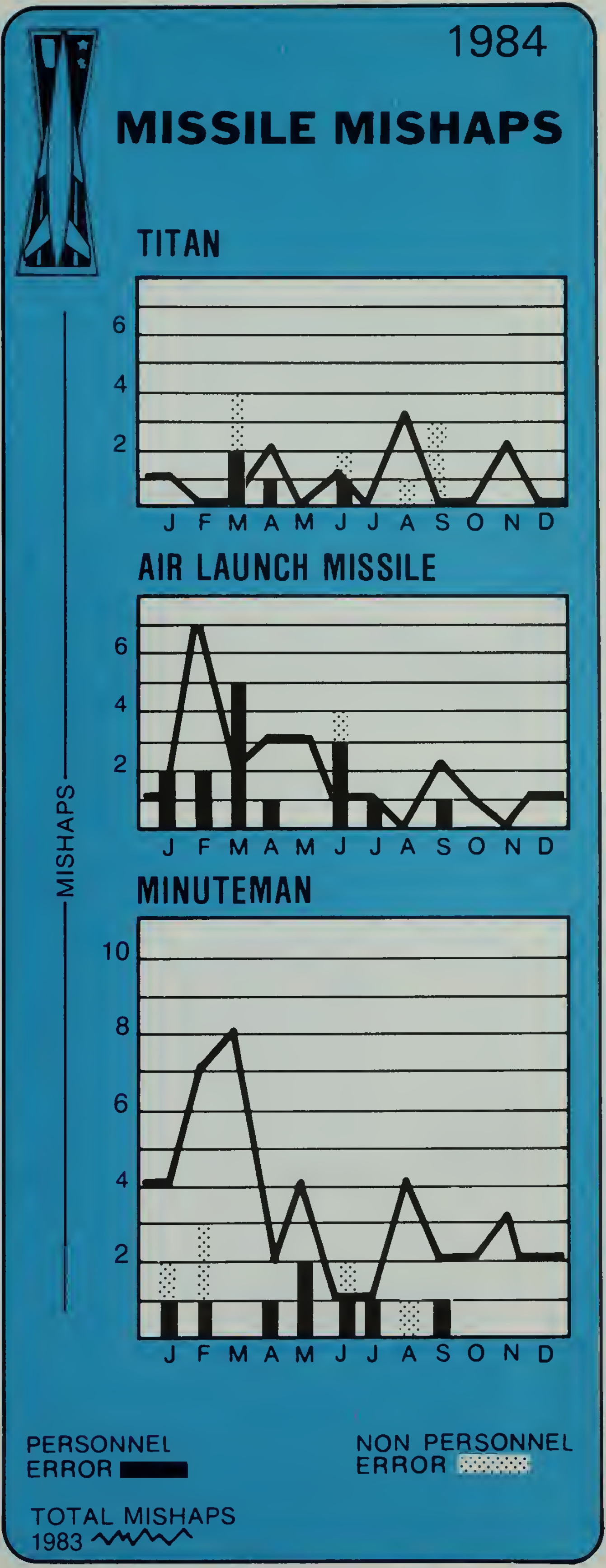
Six: Have you ever really thought about the fact that many procedures are the result of tragedy, of people who already paid the price of ignorance?

Seven: Do you think you're smarter than whoever wrote the book, and that your way is so much better you can ignore tech data?

Eight: Have you ever had a close brush with disaster because you rushed a task or missed a checklist step?

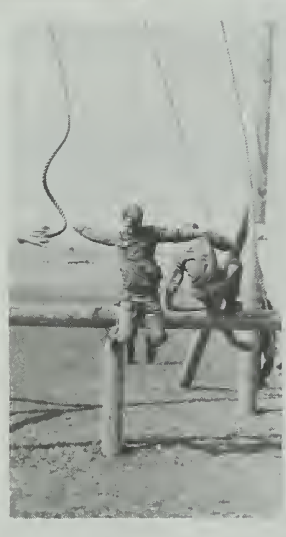
Nine: Have you developed the discipline to do things right when no one's there to watch or follow up?

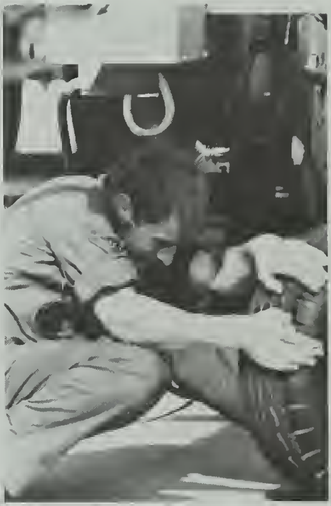
Ten: Do you feel uneasy about how you answered these questions? If so, you may well be an accident waiting to happen — or a missed opportunity to keep one from happening. Remember — a double standard is no standard at all. It results from either poor training or a poor attitude and neither one has any place in our business.



Cont'd from page 7

Force, who expressed his admiration for all the competitors. The SAC Senior Enlisted Advisor, CMSgt Jan C. Boyd presented the Spirit Bell to the 410 BMW from K. I. Sawyer. The Spirit Bell is awarded to the team that demonstrates the finest spirit throughout the competition. The closing remarks were presented by General Bennie L. Davis, CINCSAC. Gen Davis summed up everyone's feelings when he said, **"Although there can be only one winner, there are no losers."**





SAC SAFETY SCREEN

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR 127-2/SS1*.

911 AREFS, Seymour Johnson Crew E-111: P Capt Paul W Carr, CP 1Lt Leo R Stubbs, N Capt David A Crockett, BO TSgt Vivian D Hunt

911 AREFS, Seymour Johnson Crew E-114: P Capt Marc D Felman, CP 1Lt Mark L Blanchard, N 1Lt Jonathan D VanGuilder, BO TSgt Julius A Howell

97 AREFS, Blytheville Crew S-101: AC Maj John Tucker, CP 1Lt Richard Busa, N Capt Charles Carroll, BO TSgt Rex Chilton

97 AREFS, Blytheville Crew S-102: AC Capt Fred Vanecek, CP 1Lt Thomas Tucker, N Capt Harry J Davis, BO SSgt Jeffrey Boutwell

340 BMS, Blytheville Crew R-32: P Capt Gerald T O'Connor, CP 2Lt Joseph T Greene, RN Capt Jerry L Dillion, N 1Lt Charles M Cook, EWO 1Lt Robert H Johnson, G SSgt Robert L Melton

340 BMS, Blytheville Crew R-30: P Maj Charles U Glazener, CP 1Lt Robert P McVey, RN 1Lt John E Alerding, N 1Lt Harry G Edwards, EWO 1Lt Richard L Lambaise, G SSgt Donald D Miller

596 BMW, Barksdale Crew R-61: P Capt Sameul R Dick, CP 1Lt Richard J Wangler, RN Capt Richard Correa, N 1Lt John R Pearcy, EWO 1Lt Terry M Patsos, G A1C Benjamin F Dowis III

920 AREFS, Wurtsmith Crew E-146: AC Capt Bruce H Sweezy, CP 1Lt Kenneth A Hendrickson, NN Capt Steven J Gensheimer, BO SSgt Robert A Potts

321 SMW, Grand Forks Crew R-114: MCCC 1Lt David B Hege, DMCCC 2Lt Robert Hunsaker

308 SMW, Little Rock Crew R-100: MCCC Capt Ronald Hunt, DMCCC 2Lt William VanCleade, MSAT A1C Martin Elmore, MFT Sgt Scott Lindquist

381 SMW, McConnell Crew R-044: MCCC 1Lt William I Freind, DMCCC Capt Glenn E Jones, MSAT A1C James A Price, MFT A1C Allen G Slater

44 SMW, Ellsworth Crew R-182: MCCC 1Lt Gary F Barefoot, DMCCC 2Lt Donald P Desaulniers

38/343 SRS, Offutt Crew S-01/E-45: P Maj Michael J Cook, CP Capt David E Hedin, N-1 Maj Thomas K Petersen, N-2 1Lt Keith B Stachowski, RAVENs Capt Stephen Marchitelli, Capt Mitch Phillips, Capt Dave W Woolkalis, 1Lt William B Mitchell

4 ACCS, Ellsworth Crew E-110: AC Capt Timothy B Sullivan, CPX Capt Jack A Ziemer, CPY Capt William N Herzog Jr, NN 1Lt Dean C Phillips Jr, BO SSgt Angel L Rodriquez

906 AREFS, Minot Crew E-115: P Capt James Prisco, CP 2Lt Gregory Barclay, N Capt Marcus Moss, BO SSgt Michael Trace

23 BMS, Minot Crew S-02: IP Maj William D Howell, ICP Capt Keith T Otsuka, IRN Capt John W Kyme, IN 1Lt Christopher A Cook, IEW Capt Douglas R Callihan, IAG TSgt Lee M Cothran, IP Maj John B Mallory

524 BMS, Wurtsmith Crew E-14: AC Capt Kenneth L Heishman, CP 1Lt Michael D Walker, IRN Capt Richard B Garner, NN 1Lt Taras R Butrej, EWO 1Lt Michael E Voelk, AG SSgt Wayne Humphrey

UNIVERSITY OF FLORIDA
3 1262 09683 6043

FLARE

HALL OF FAME

TACTICAL FLYING

OVER TWENTY-EIGHT YEARS

170 AREFG, McGuire (NJANG)	Feb. '56

OVER TWENTY-SIX YEARS

171 AREFW, Greater Pittsburgh (PAANG)	Mar. '58
157 AREFG, Pease (NHANG)	Jun '58

OVER TWENTY-FIVE YEARS

940 AREFG, Mather (USAFR)	May '59

OVER TWENTY-THREE YEARS

151 AREFG, Salt Lake City (UTANG)	Feb. '61
134 AREFG, McGhee Tyson (TNANG)	Aug. '61

OVER TWENTY-TWO YEARS

11 SG, Fairford	Feb. '62
340 AREFG, Altus	Jun '62
96 BMW, Dyess	Aug. '62

OVER NINETEEN YEARS

160 AREFG, Rickenbacker (OHANG)	Dec. '64
320 BMW, Mather	Jul '65

OVER EIGHTEEN YEARS

452 AREFW, March (USAFR)	Sept '66

OVER SEVENTEEN YEARS

92 BMW, Fairchild	Feb. '67
55 SRW, Offutt	Jul '67
2 BMW, Barksdale	Aug '67

OVER FIFTEEN YEARS

5 BMW, Minot	Feb.'69
42 BMW, Loring	Sept '69
141 AREFW, Fairchild (WAANG)	Oct '69

OVER FOURTEEN YEARS

28 BMW, Ellsworth	May '70

OVER TWELVE YEARS

101 AREFW, Bangor (MEANG)	Mar '72
306 SW, Mildenhall	Apr '72
416 BMW, Griffiss	May '72
305 AREFW, Grissom	Aug '72

OVER ELEVEN YEARS

379 BMW, Wurtsmith	Apr '73

OVER TEN YEARS

931 AREFG, Grissom (USAFR)	Feb '74
384 AREFW, McConnell	Mar '74
189 AREFG, Little Rock (ARANG)	May '74

OVER NINE YEARS

43 SW, Andersen	Dec '74
68 AREFG, Seymour Johnson	Sep '75

OVER SEVEN YEARS

410 BMW, K.I. Sawyer	Apr '77
190 AREFG, Forbes (KSANG)	Apr '77
128 AREFG, Milwaukee (WIANG)	Jul '77

OVER FIVE YEARS

376 SW, Kadena	Aug. '79

OVER FOUR YEARS

7 BMW, Carswell	Jul '80
319 BMW, Grand Forks	Sept '80
380 BMW, Plattsburgh	Oct '80

ICBM

OVER TWENTY YEARS

1 STRAD, Vandenberg	Sept '64

OVER FOURTEEN YEARS

341 SMW, Malmstrom	Apr '70

OVER TWELVE YEARS

321 SMW, Grand Forks	Aug '72

OVER TEN YEARS

351 SMW, Whiteman	Oct '74

OVER NINE YEARS

91 SMW, Minot	Nov. '74

OVER SIX YEARS

381 SMW, McConnell	Aug '78

OVER FIVE YEARS

44 SMW, Ellsworth	Nov '78

OVER FOUR YEARS

90 SMW, F.E. Warren	Dec '79
308 SMW, Little Rock	Sept '80

To gain listing in the Hall of Fame, a SAC or ARF unit must be Class A mishap-free for 48 months.